Georgia Tech Foundation

President G. Wayne Clough
September 9, 2004

Incoming freshmen

- 2,600 students (+18%)
  - 782 women (+28%)
  - 153 African Americans (+21%)
  - 105 Hispanics (+48%)
  - 116 international (+35%)
- 1337 average SAT
- 8 perfect SATs, 1 perfect ACT
- 5 sets of twins

Students shine

GT Motorsports wins Formula SAE in Australia

Goldwater Scholarships:
Thomas Oliver
Mark Callaghan

Laurence Ralph, Mellon Fellowship in Humanistic Studies

Gabe Brostow, Marshall Sherfield Fellowship

Monique Gupta, Churchill Scholarship

Jia Xu, Marshall Scholarship

Faculty honored

National Medal of Technology: Russell Dupuis, elec and comp engineering

Presidential Early Career Award for Scientists and Engineers: Julia Kubanek, biology

National Academy of Engineering: Fred Juang, elec and computer eng, and Jeff Wu, industrial/systems eng

Presidential Green Chemistry Challenge Award: Charles Eckert, chemical & biomolecular engineering, and Charles Liotta, chemistry

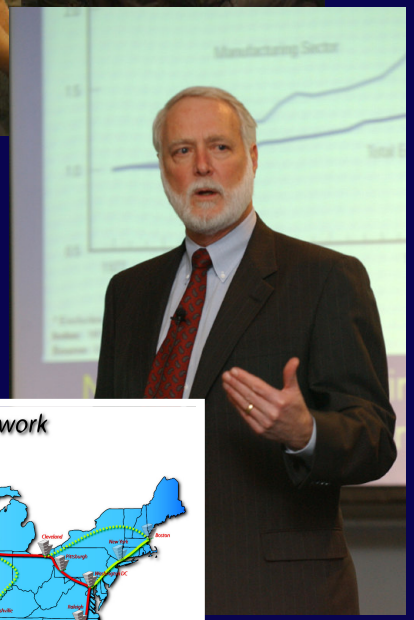
Rankings remain high

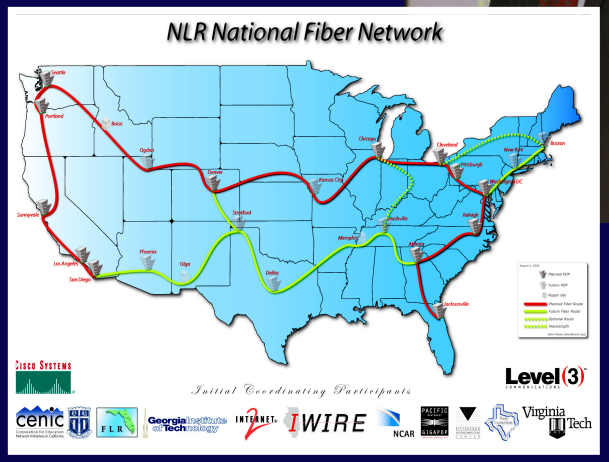
- Georgia Tech remains among top ten public universities
  - Peer assessment score in top 25 of all universities, tied with Emory and Georgetown
- College of Management moves up to #34
  - 3 programs in the nation's top 15
- All engineering programs in the top 15
  - 4 engineering programs in the top 5
- Co-op program among 11 "Academic programs to look for"
- #1 among publics in % of alumni who contribute

U.S. News & World Report 2005 Undergraduate rankings

Research: New milestones

- Expenditures: ~$425 million
- Invention disclosures: 277
- NIH: $17.2 million (doubled in past 2 years)
- Interdisciplinary research: $106.8 million in active contracts
- Ovarian Cancer Center opened





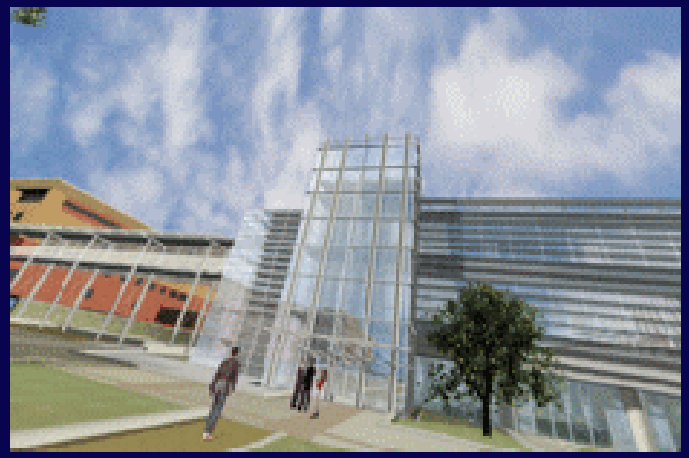
Tech's national presence

- National Innovation Initiative
- Sam Nunn Policy Forum on Bioterrorism
- National Lambda Rail
- National Nanotech Infrastructure Network

Construction continues

Campus Rec Center

Student Center Commons



Klaus Advanced Computing Building

Molecular Science and Engineering Building

It can be done

5 teams in the top 10 for their sport.
15 of 17 teams in post-season play.
Lacrosse, rowing clubs go national.

First basketball team from Georgia to play in national championship game.

Volleyball team finished its season ranked 8th in the nation.

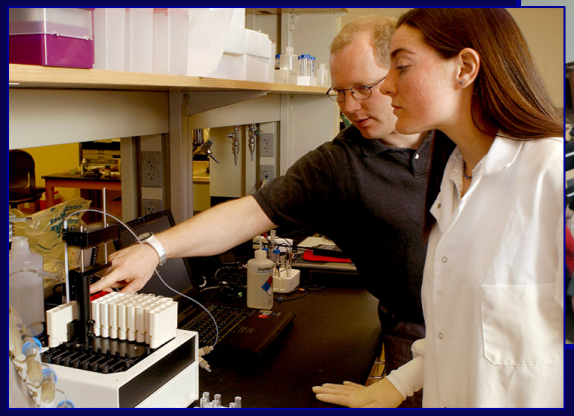
Baseball team won 20 straight, became NCAA Atlanta Region Champs.

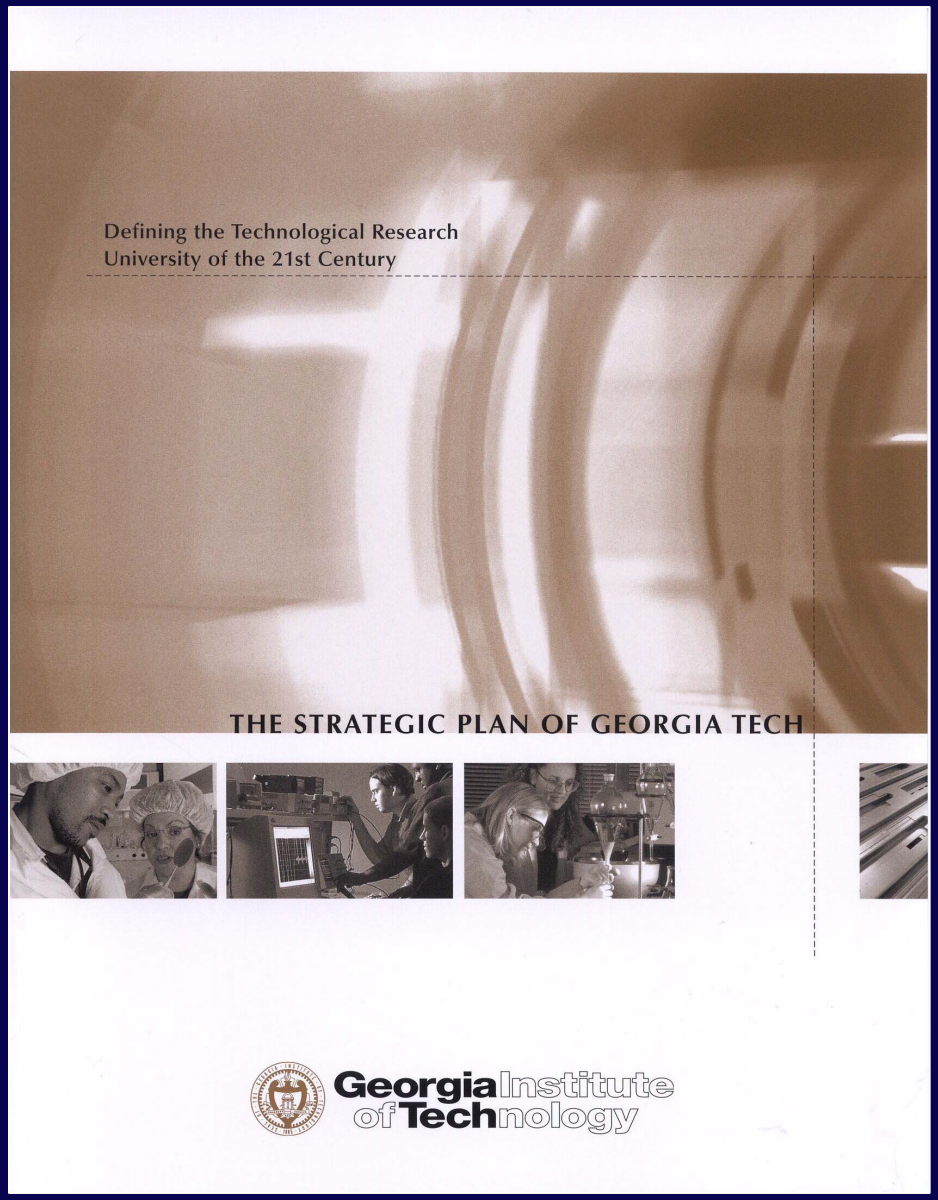
Budgets – not a pretty picture

- Governor recalls “payroll shift.”
- Leaves $170 m budget hole; USG “share” is $68 m; Tech “share” $7.3 m.
- Timing – not good.
- Midyear tuition increase?
- Layoffs expected; enrollments capped?
- Total GT budget cuts to date, $45 m.
- FY06, formula funding restricted

Vision and mission

Georgia Tech will define the technological research university of the 21st century and educate the leaders of a technologically driven world.



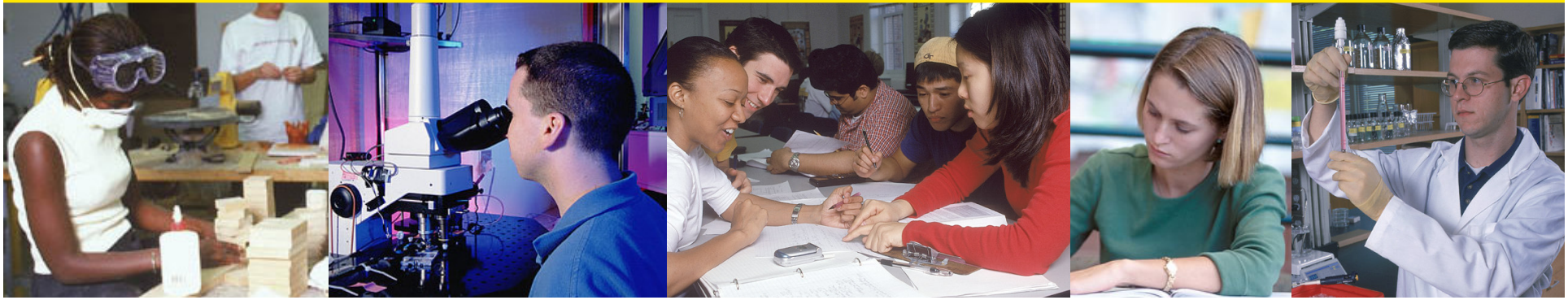


Strategic goals

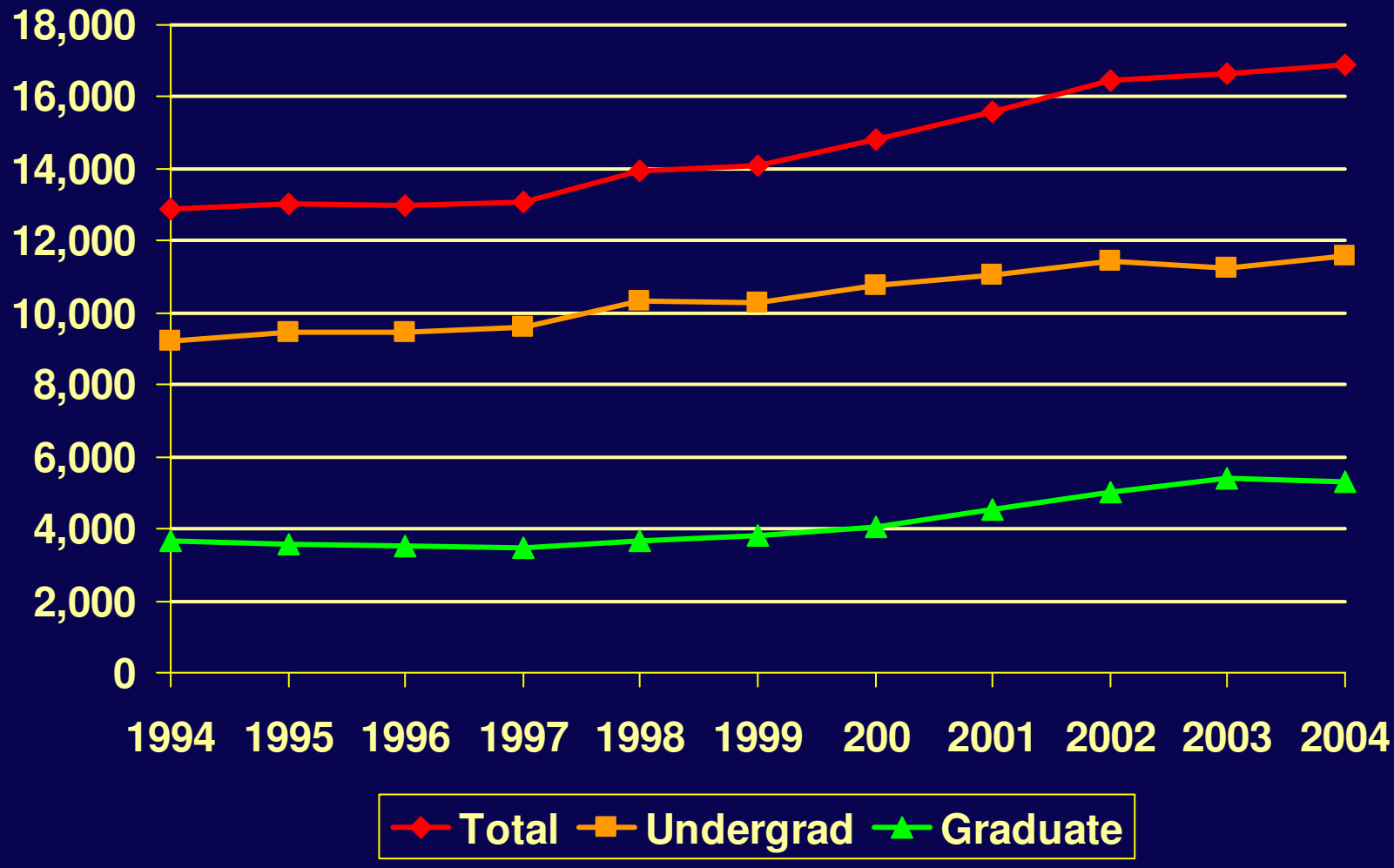
- Student-focused Education
- Diverse Community
- Enhance Research Enterprise
- Expanded Outreach
- Intelligent Development of Technology
- Supportive Administrative Infrastructure
- Facilities Improvement and Expansion

Student-focused education

- Appropriate student:faculty ratio
- Full faculty involvement in instruction and research
- Comprehensive curricular and co-curricular programs for student leadership
- Diverse learning experiences (i.e., study abroad, undergraduate research, co-op, drama, recreation, art, athletics, etc.)

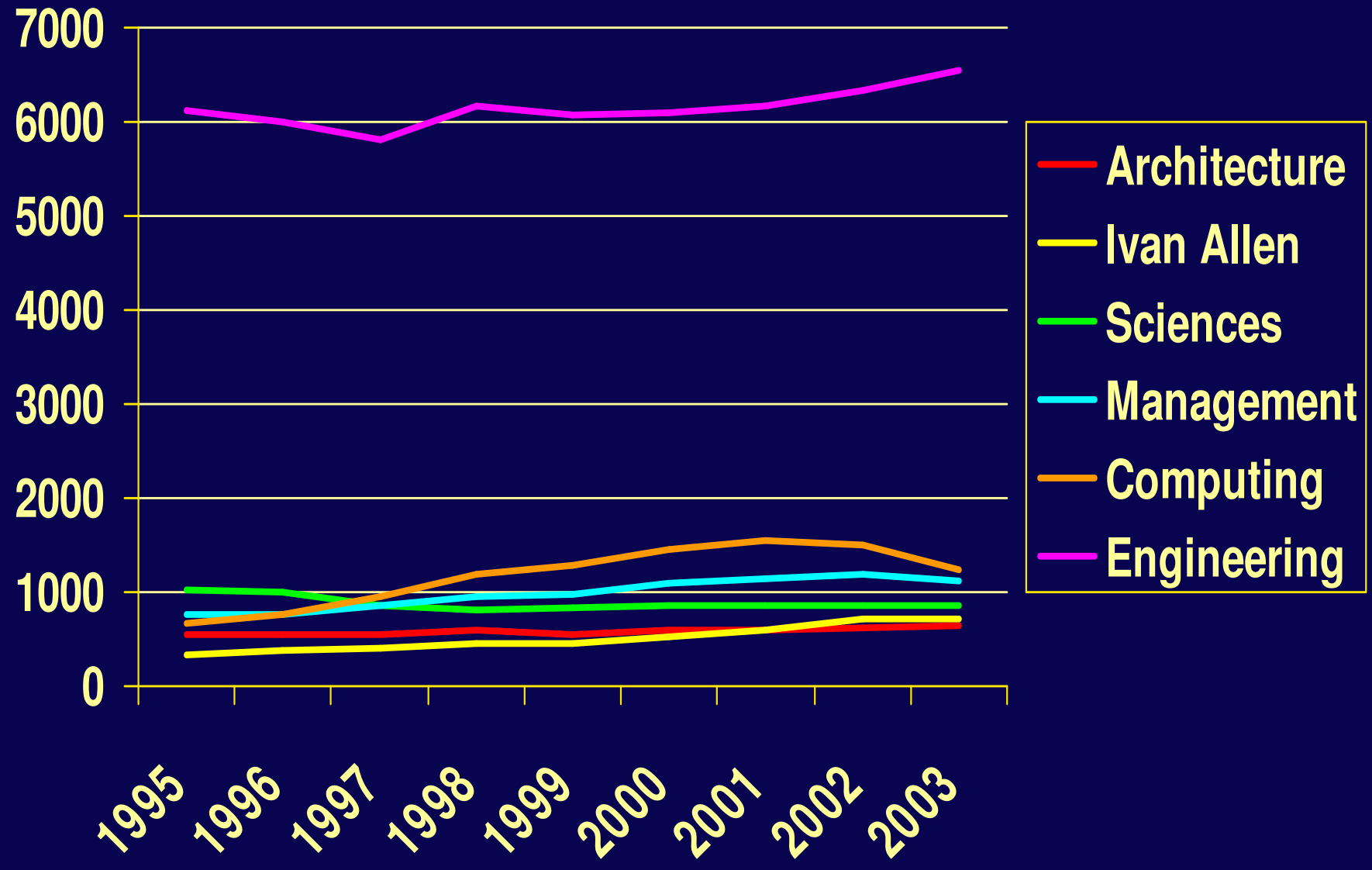


Fall enrollment



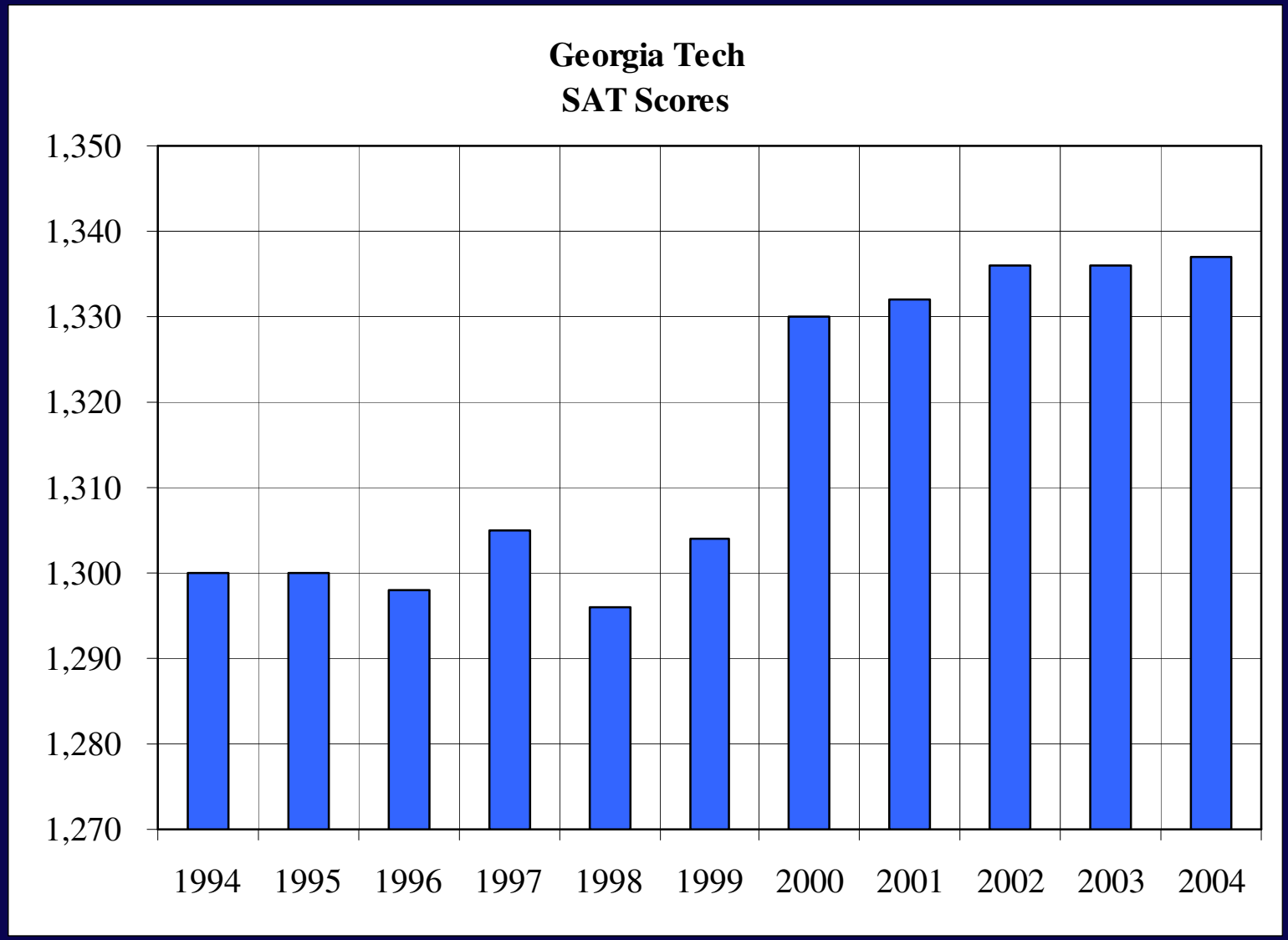
Over 650 students are at other campuses or online

Enrollment by college

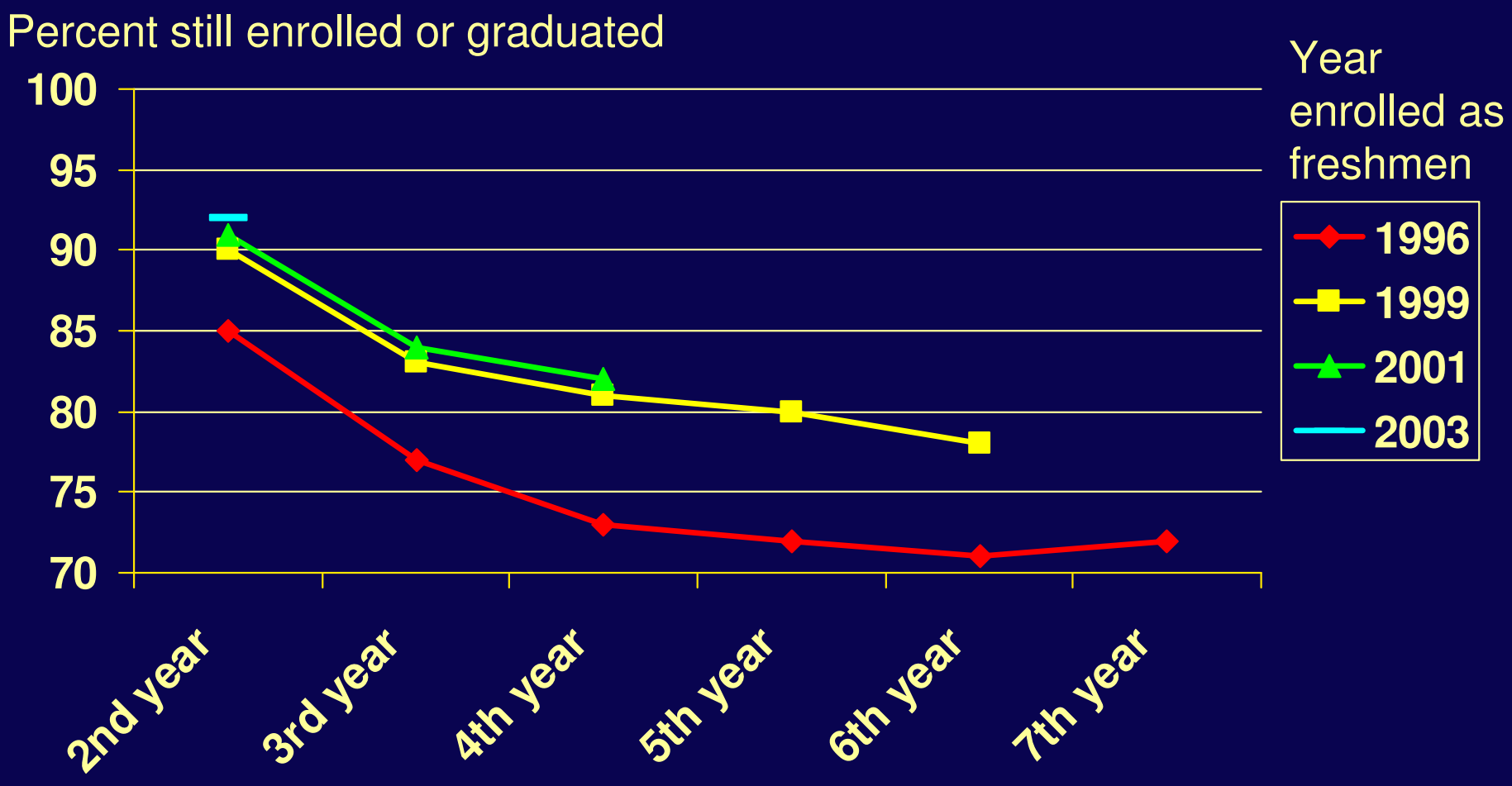


Average SAT scores

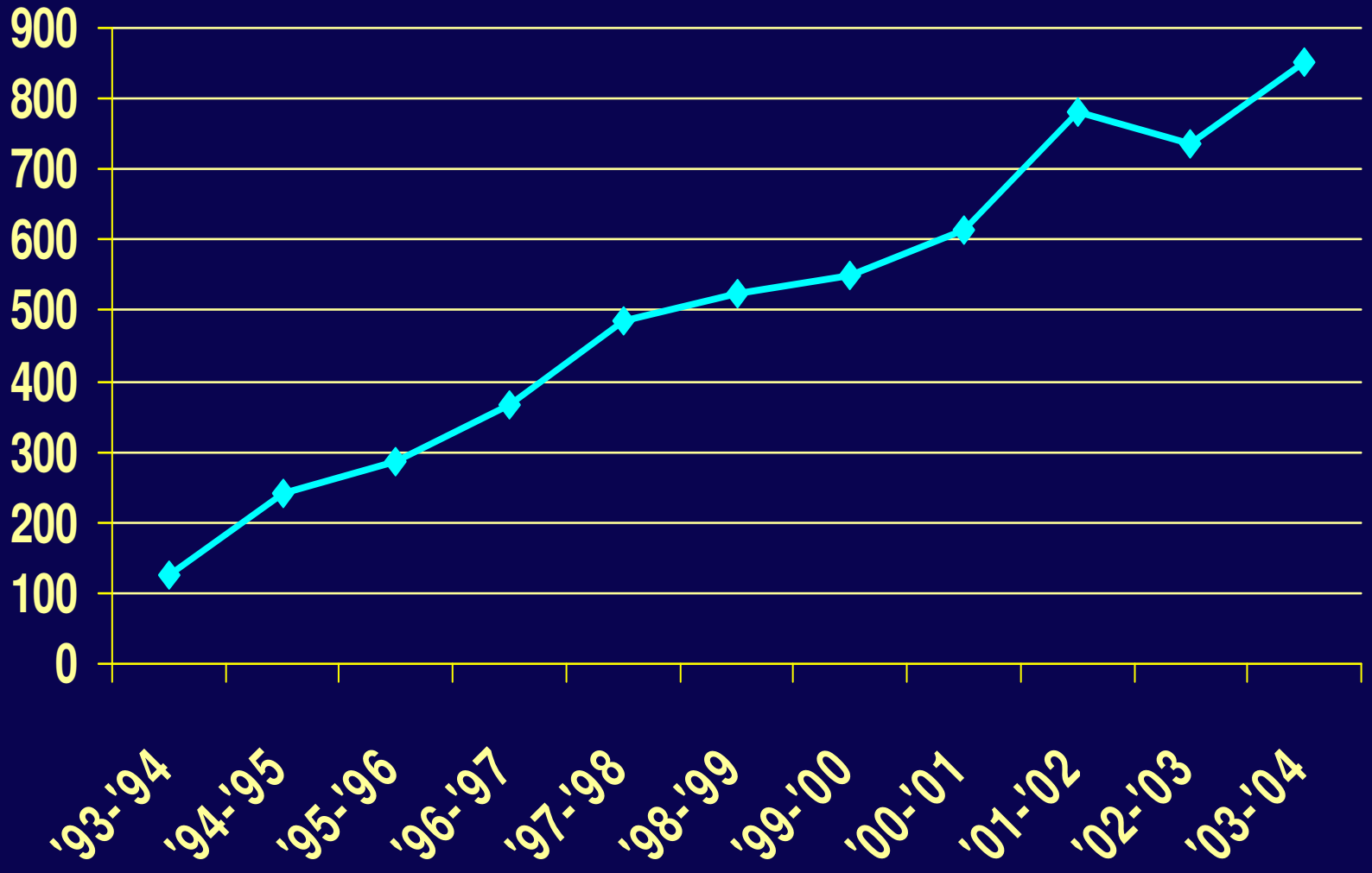
Incoming freshman class



Retention improves

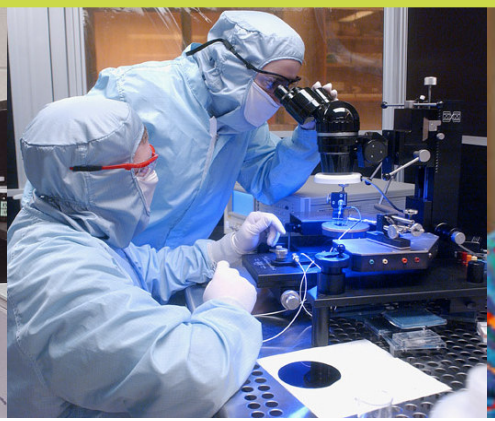


Students studying abroad



Enhanced research enterprise

- Continue developing research initiatives – especially in microelectronics, nanoscience and technology, bioscience and technology, manufacturing, entrepreneurship, sustainability, and telecommunications
- Diversified research base (i.e., industry, state, etc.)
- Commercialization support
- Opportunities for interdisciplinary collaboration

Faculty honors

Endowed chairs

1995: 36

2004: 114

THE NATIONAL ACADEMIES
Advisers to the Nation on Science, Engineering, and Medicine

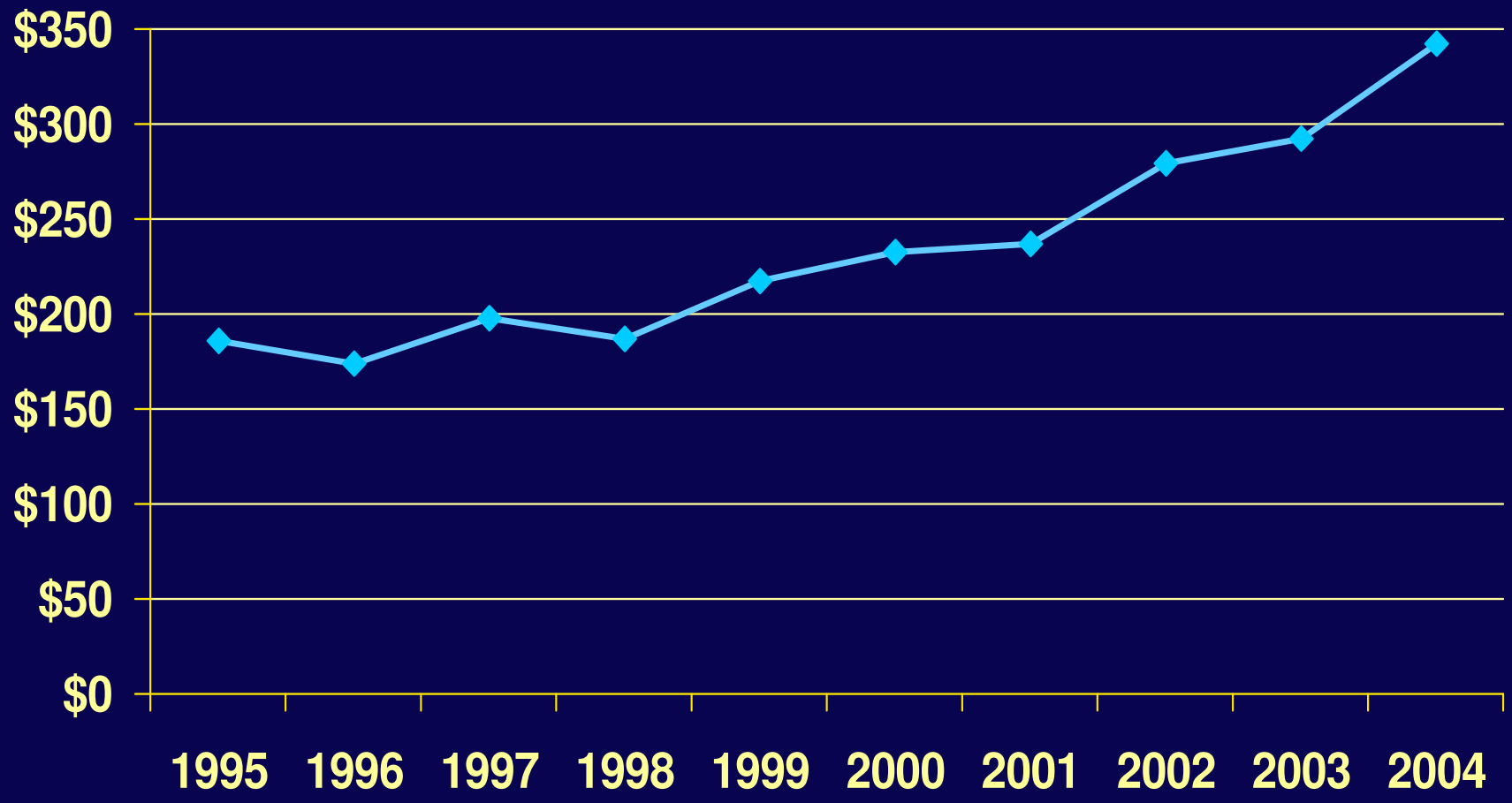
Academy members

1995: 13

2004: 30

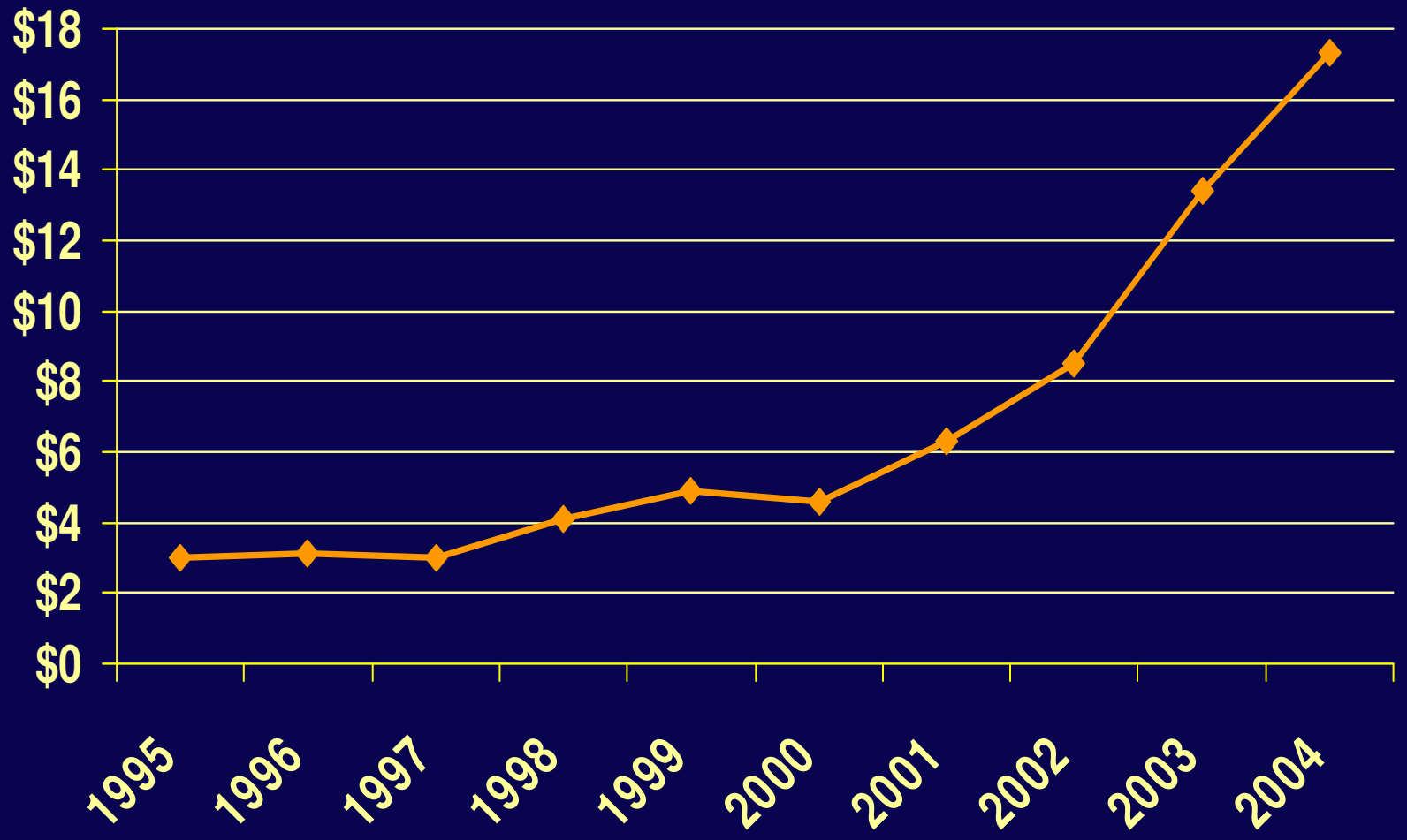
Research awards

(in millions)

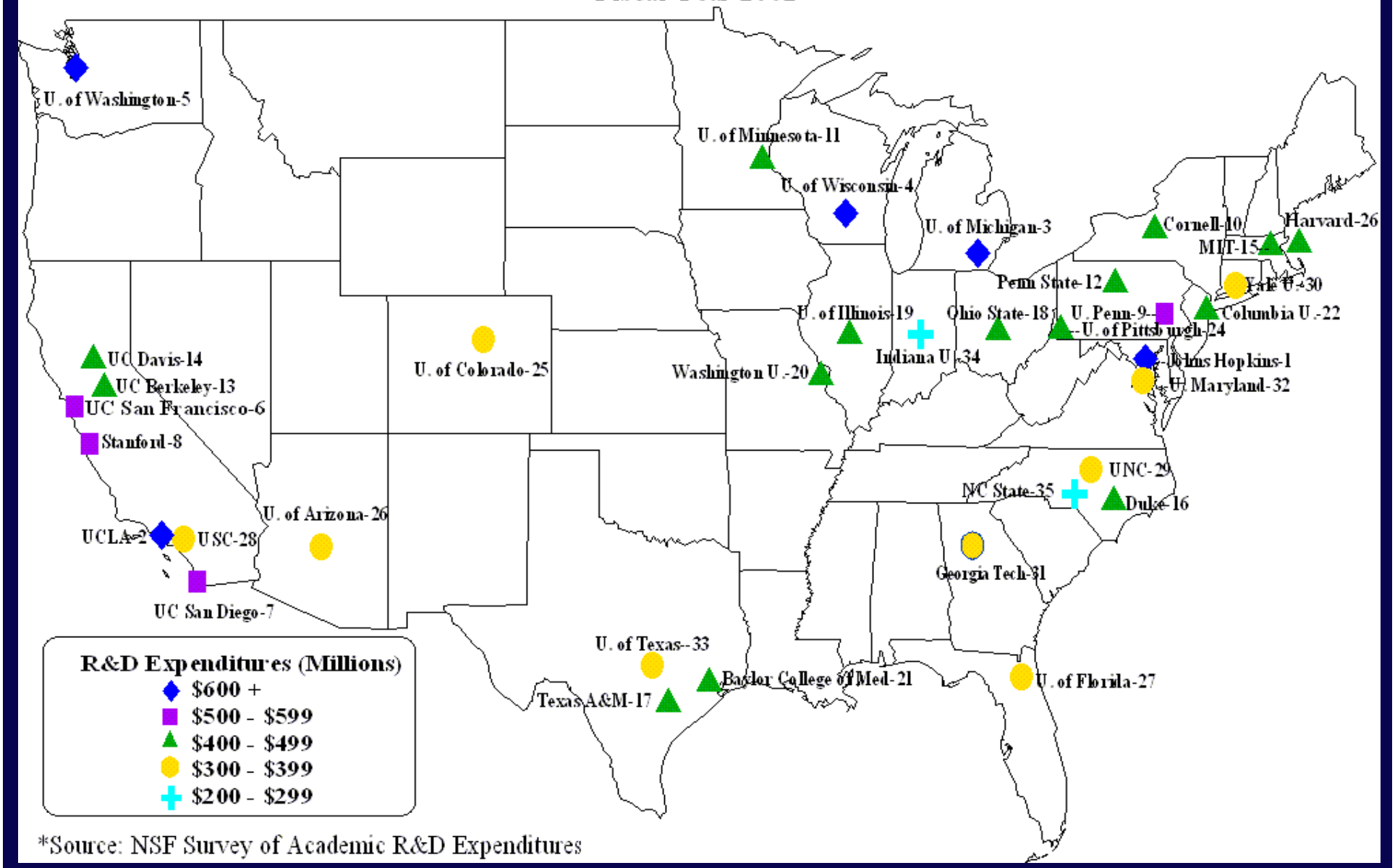


NIH research awards

(in millions)



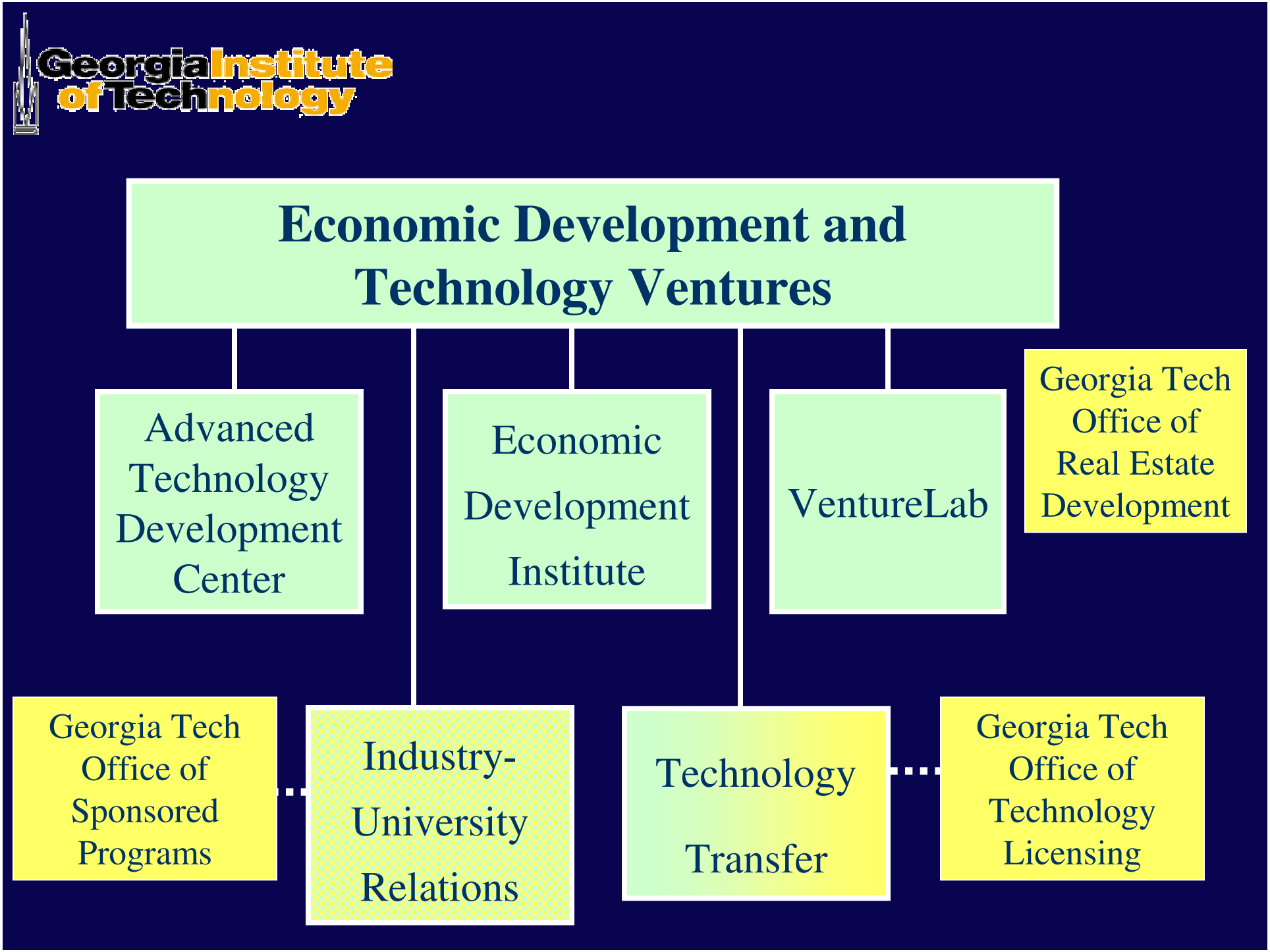
Total Research and Development Expenditures
Top 35 Colleges & Universities
Fiscal Year 2002

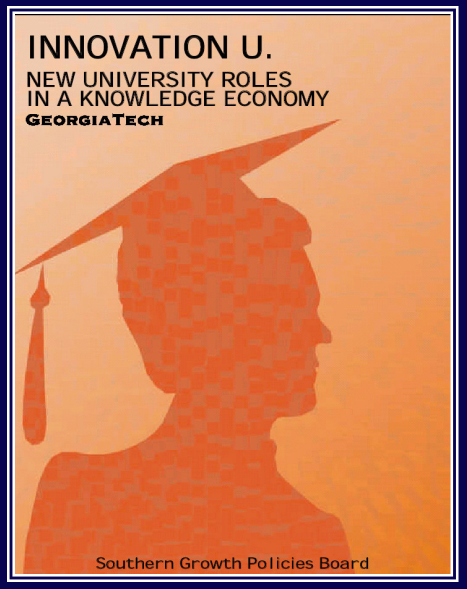


*Source: NSF Survey of Academic R&D Expenditures

Expanded local and global outreach

- Economic development activities
- Advanced Technology Development Center
- Global Learning Center
- Technology transfer
- Research/technology park


Georgia Institute of Technology
Economic Development and Technology Ventures
Advanced Technology Development Center
Economic Development Institute
VentureLab
Georgia Tech Office of Real Estate Development
Georgia Tech Office of Sponsored Programs
Industry-University Relations
Technology Transfer
Georgia Tech Office of Technology Licensing



"Virtually every combination of industry relationship or economic development activity can be found at Georgia Tech, and in a very real sense the school is an operating partner with Georgia state government…. **Perhaps more than any other research university in North America, economic development is an integral, critical component of the mission of the Georgia Institute of Technology,** and this has been true from its very inception."

Southern Growth Policies Board *Innovation U* study

ATDC facilities

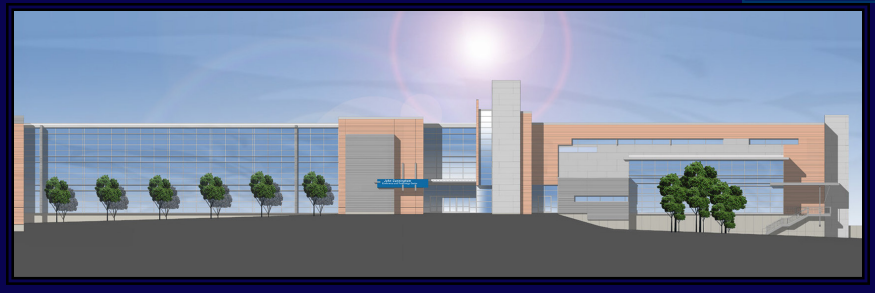
ES&T

Technology Square

GCATT

Savannah

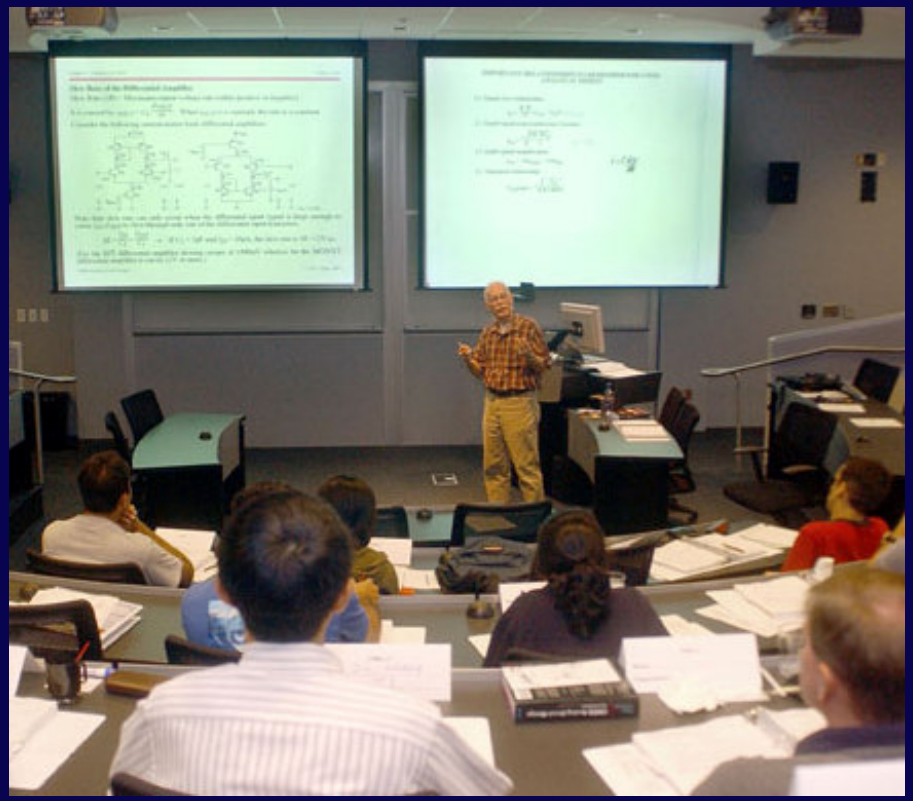
France



Columbus

Intelligent development of effective information and educational technology

- Wireless campus
- Incorporation of technology into the classroom (Technology Square)
- Enhance faculty effectiveness through technology (CETL)
- Internet 2, National Lambda Rail

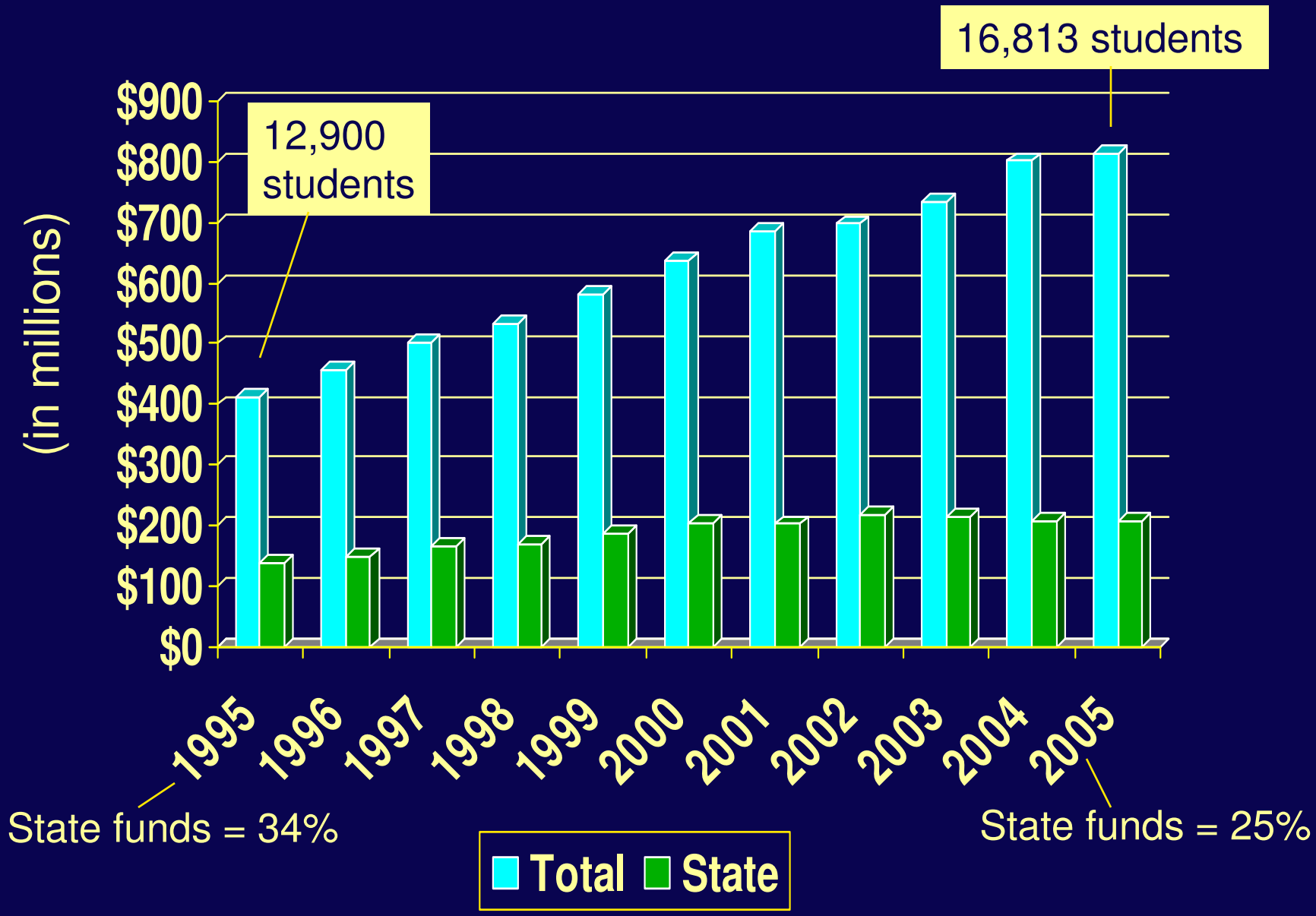


National LambdaRail infrastructure

Supportive, collaborative, and effective administrative infrastructure

- Seamless administrative systems and processes
- Training for GT administrative and customer services
- Communication
- Keep pace with demand for services
- Provide budget and facilities to support aspirations

Budget expenditures

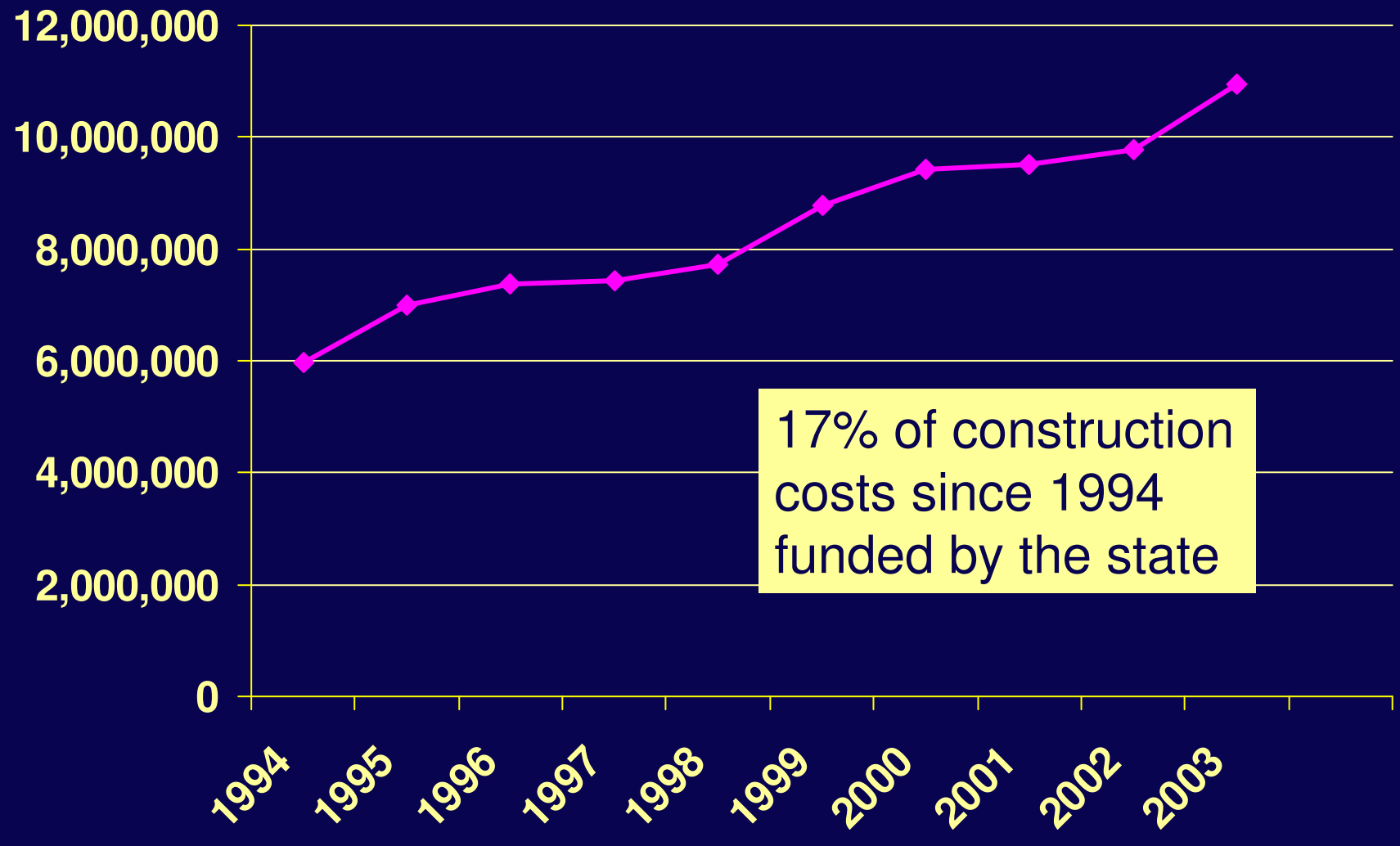


Facilities improvement, expansion

- Leading-edge competitive facilities
- Interactive learning centers
- Research neighborhoods

- Live/work/play environment
- Accommodate GT growth
- Sustainability

Campus square footage



Four campuses on three continents

Georgia Tech-Atlanta

Georgia Tech-Singapore

Georgia Tech-Lorraine

Georgia Tech-Savannah

Georgia Tech Savannah (GTS)
Goals and objectives

- Produce more engineers to meet regional needs
- Enhance access to engineering education with innovative programs that utilize distance learning
- Build a sponsored research and technology transfer environment to stimulate regional economic development

Cross-cutting themes and resources

- Not an engineering school, but a **leading technological university**
- Instead of following, LEAD

Nanoscience	Centers of excellence
Bioinformatics	$$ for emerging ideas

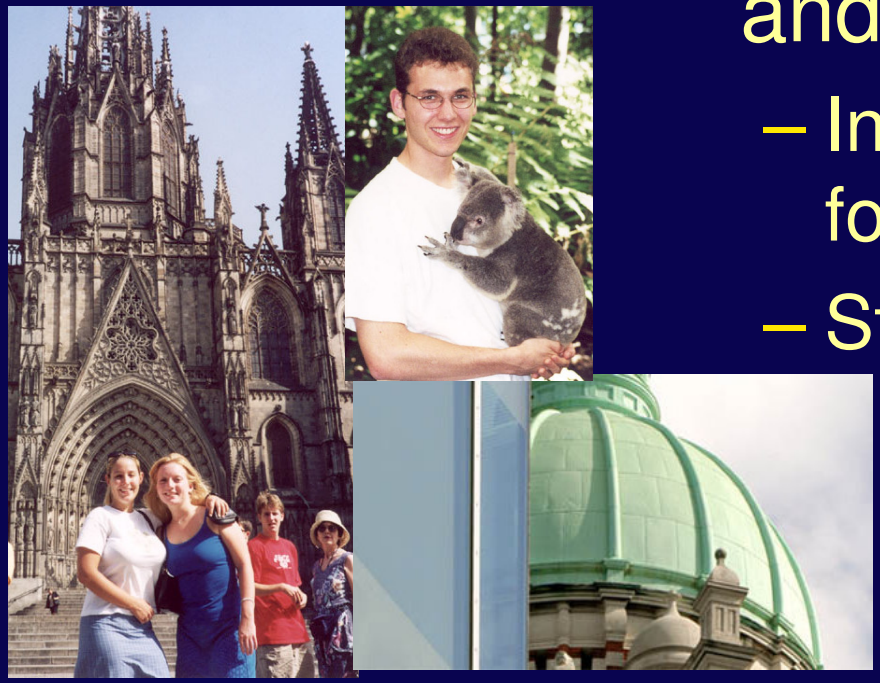
- Multidisciplinary programs and laboratories = recurring “one-time” needs

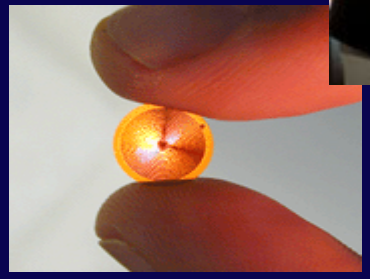
Cross-cutting themes and resources

A major research university must be a model for undergraduate education

Cross-cutting themes and resources

- Global flavor to education and research
  - International opportunities for students
  - Strategic partnerships





- Entrepreneurship and economic development

Cross-cutting themes and resources

- Students
  - Compete for the best
  - Aggressively pursue unusual ones
  - Student community and life
  - Development and placement
- Faculty: depth and succession
  - Increase in targeted areas
  - Senior “institutional” leaders
  - Creation of elite teams
  - Faculty development and life

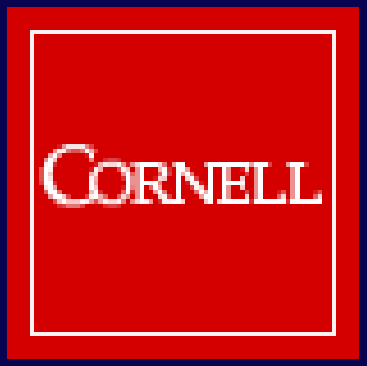
Cross-cutting themes and resources

- Competing with the best is good; winning requires the level of resources available to the best.
- “Georgia Tech is a jewel, and jewels need polishing.”

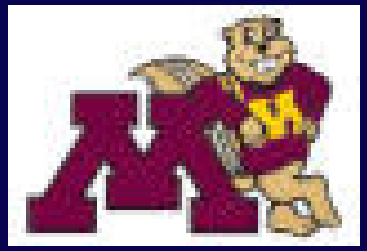
Senator Sam Nunn

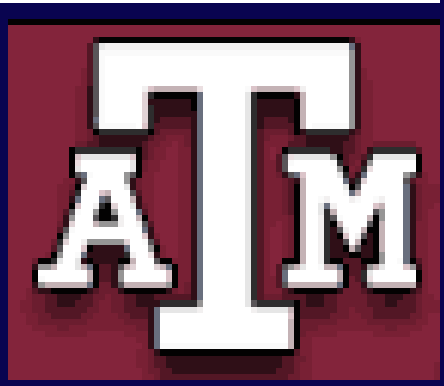
Benchmarking

Our private peers



Our public peers





Peers by reputation

MIT	1 *
Stanford	1 *
Berkeley	6
Cal Tech	7
Cornell	9 *
Johns Hopkins	9 *
Michigan	9 *
Northwestern	16
Carnegie Mellon	18 *
UCLA	18 *
UT-Austin	24
Georgia Tech	**27** *
Illinois	27 *
Washington	31
Penn State	33 *
Purdue	33 *
Minnesota	33 *
Florida	44
Texas A&M	50
Virginia Tech	57
NC State	78

* = tie

Source: ***U.S. News and World Report***, 2005 Undergraduate Rankings

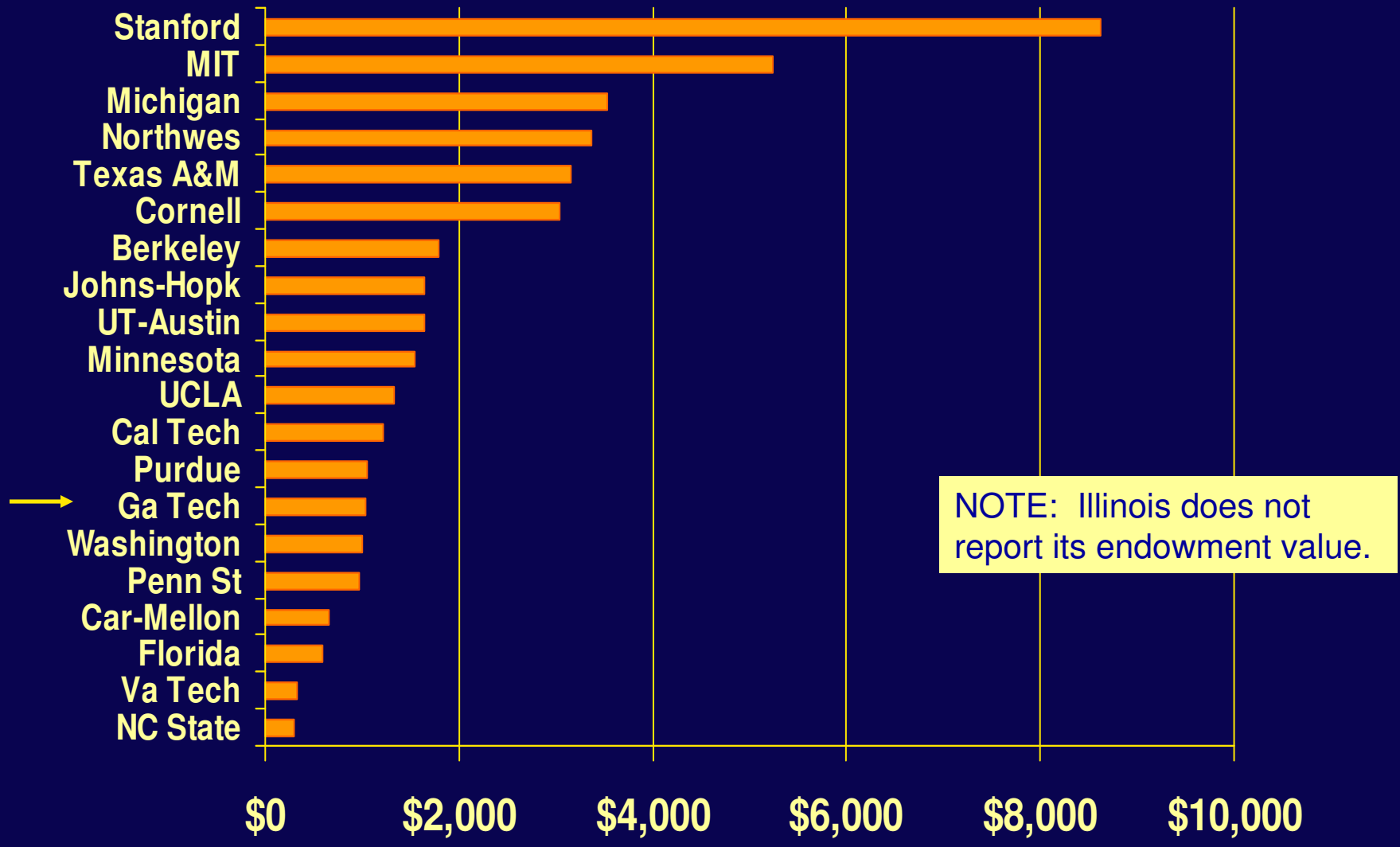
Universities with no medical schools
(by research expenditures)

1. University of California-Berkeley (13)
2. Massachusetts Institute of Technology (15)
3. University of Illinois-Urbana (19)
4. Georgia Institute of Technology (31)
5. University of Maryland-College Park (32)
6. University of Texas-Austin (33)
7. North Carolina State University (35)
8. Mississippi State University (36)
9. University of Georgia (40)
10. Rutgers, State University of New Jersey (48)

Source: NSF Survey of Academic R&D Expenditures, 2002

Peer endowments

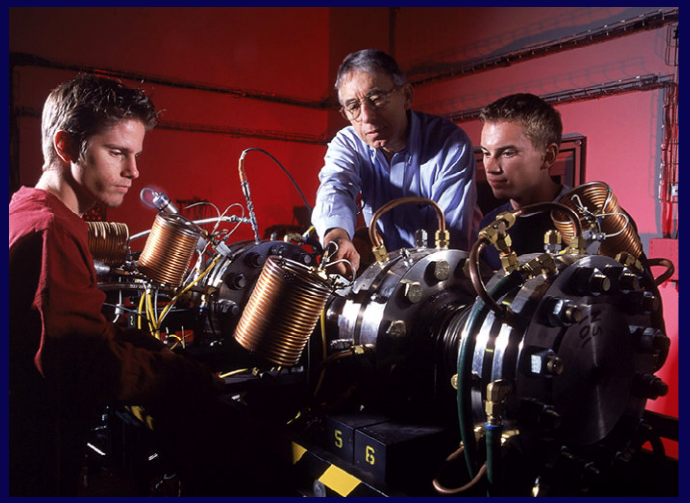
(in millions)



Source: Council for Aid to Education

Graduate rankings: Engineering

- #5 Overall
- #1 Industrial/systems
- #2 Biomedical
- #4 Aerospace
- #5 Civil
- #7 Mechanical, electrical
- #8 Environmental
- #10 Materials
- #13 Chemical



Graduate rankings: Sciences

- #12 Computer science
- College of Sciences
  - #18 Applied math
  - #32 Chemistry
  - #32 Physics
  - #68 Biology
  - #80 Psychology
    - #10 Industrial psychology

Graduate rankings: Business

- #25 MBA programs (*Business 2.0*)
- #29 U.S. business schools (*Forbes*)
  - #9 among public universities
- #42 *U.S. News & World Report*
  - #14 Production/operations management
  - #29 Information systems

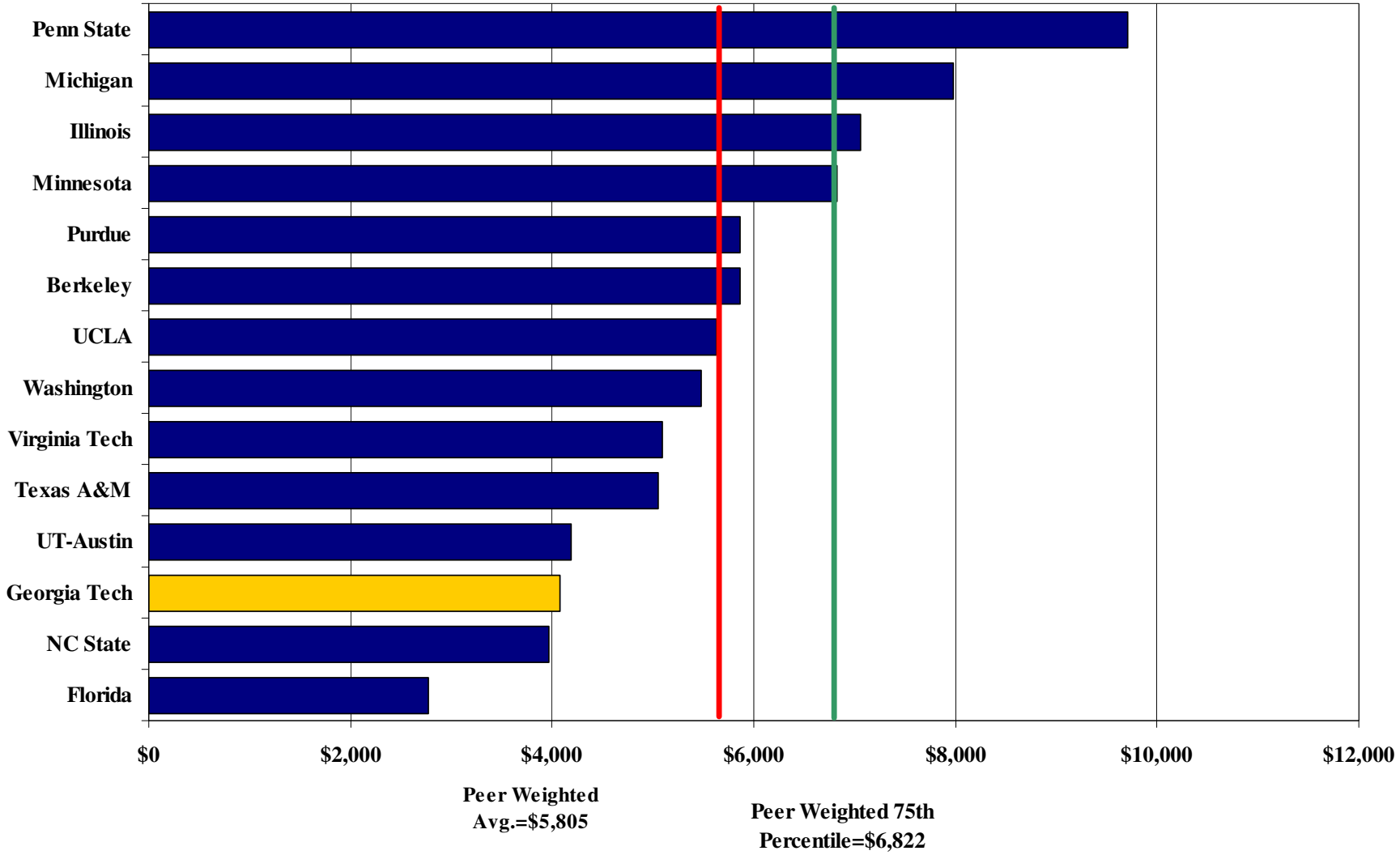



Peer student/faculty ratios

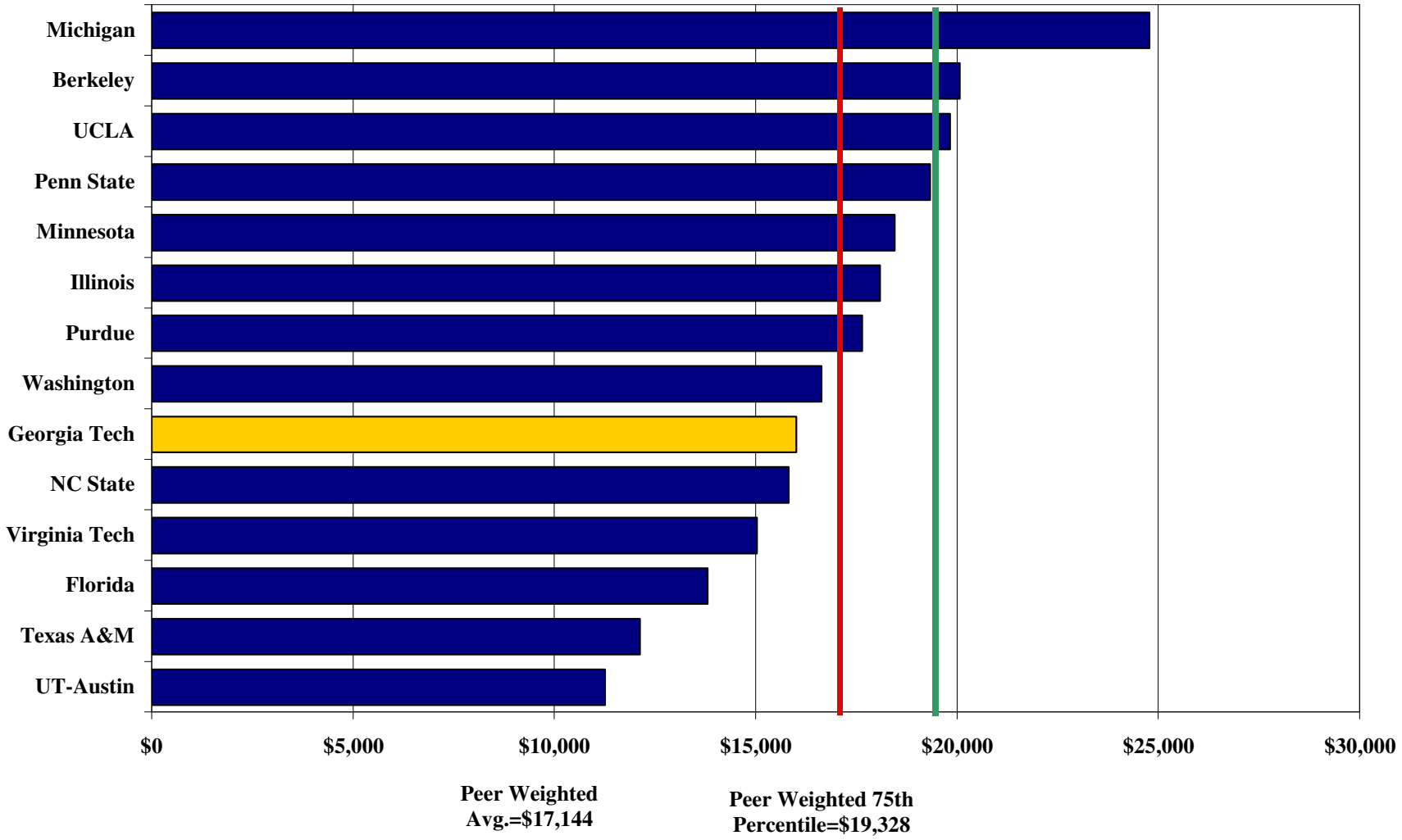
MIT	6/1	Penn State	17/1
Cal Tech	8/1	UC Berkeley	18/1
Northwestern	8/1	NC State	18/1
Carnegie Mellon	11/1	Virginia Tech	18/1
Cornell	11/1	UT Austin	19/1
Stanford	11/1	Texas A&M	20/1
Washington	12/1	Purdue	20/1
Michigan	14/1	Georgia Tech	21/1
Johns Hopkins	14/1	Illinois-Urbana	21/1
UCLA	15/1	Florida	27/1
Minnesota	16/1		

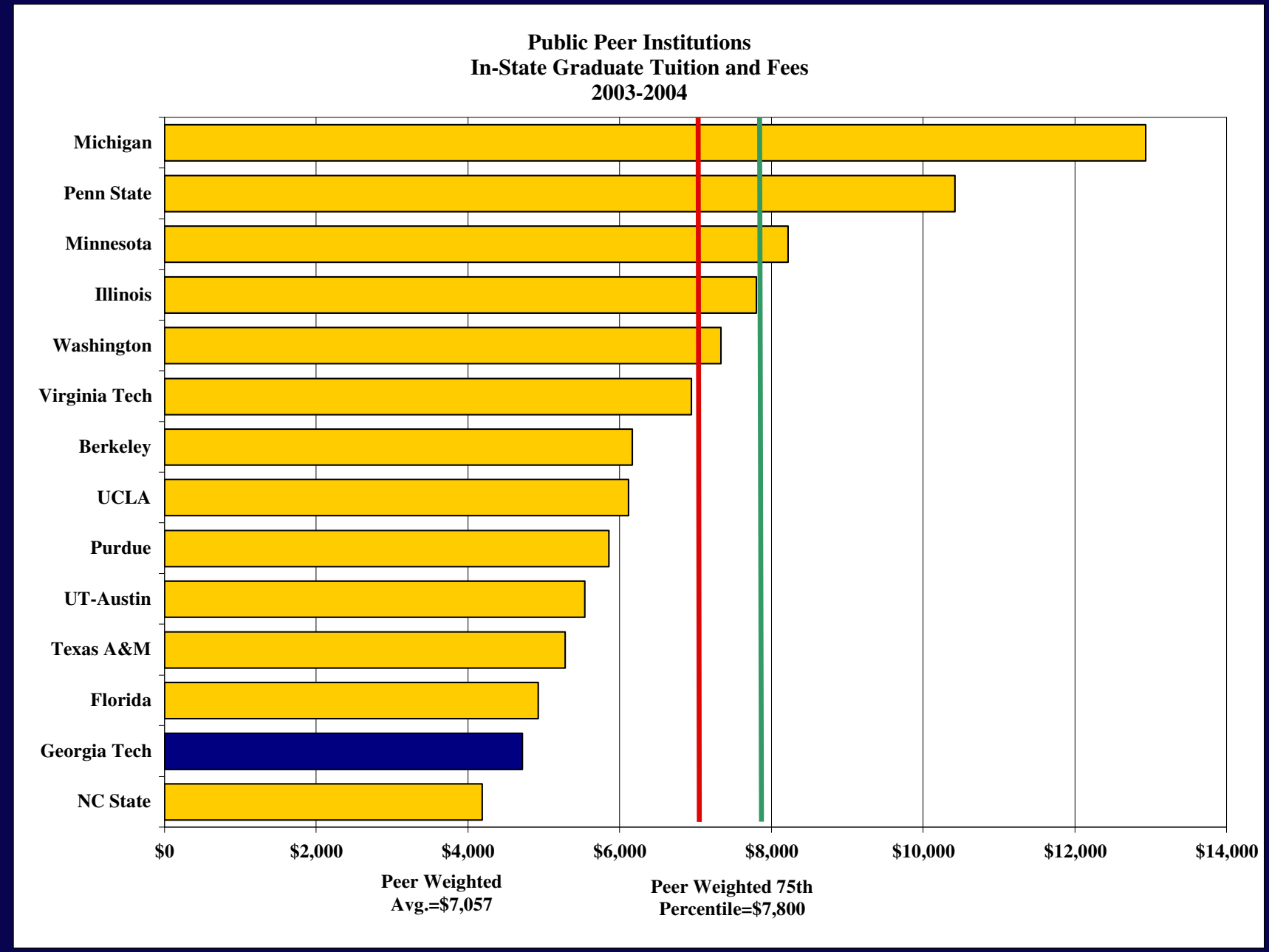
Source: Common Data Sets for each institution; 2003

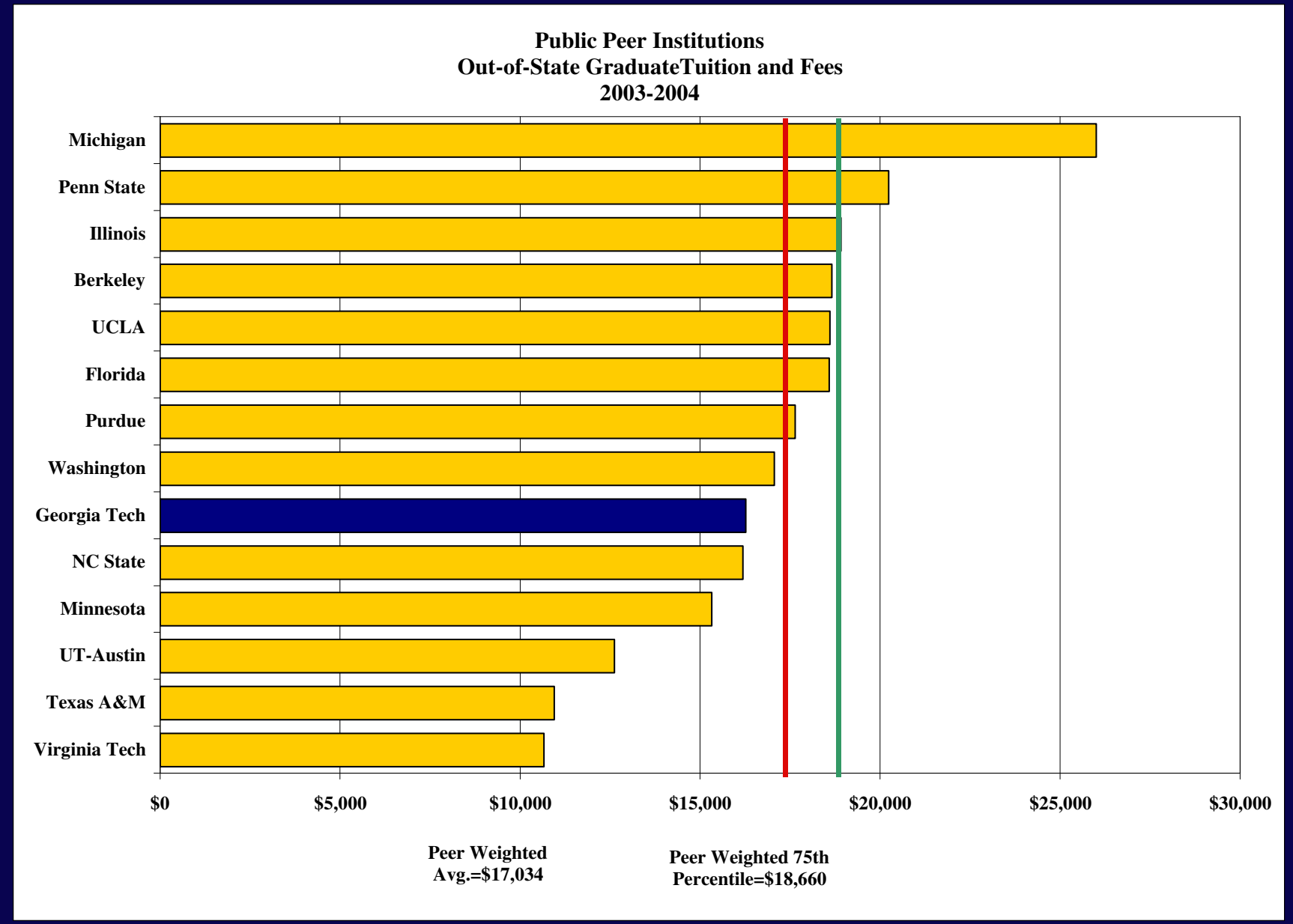
Public Peer Institutions
In-State Undergraduate Tuition and Fees
2003-2004



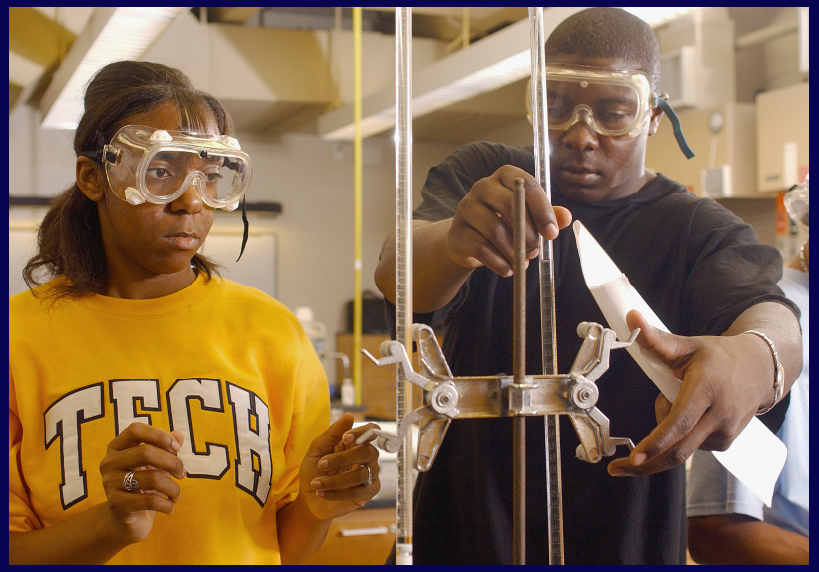
Public Peer Institutions
Out-of-State Undergraduate Tuition and Fees
2003-2004



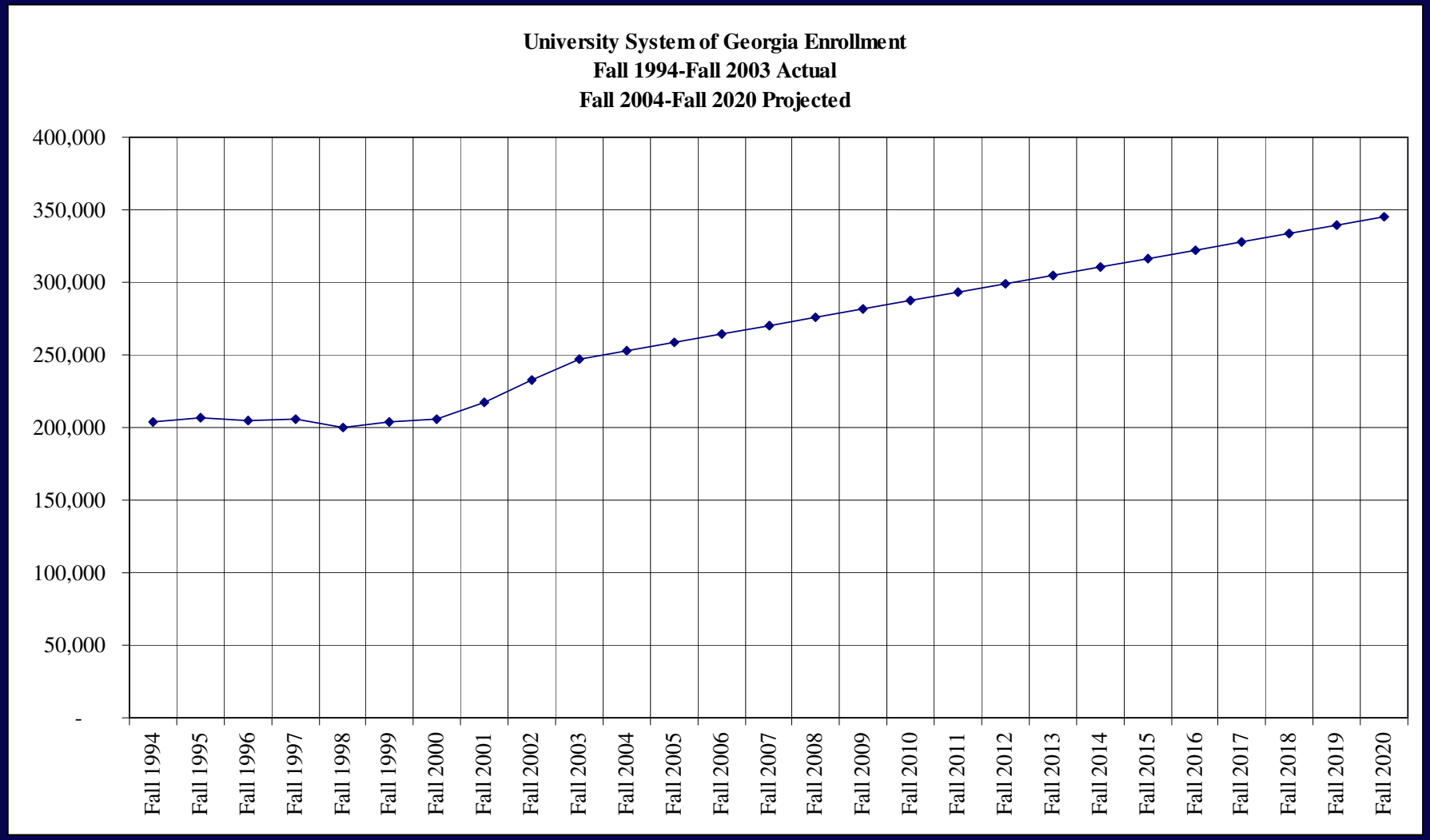

Public Peer Institutions
In-State Graduate Tuition and Fees
2003-2004
Michigan
Penn State
Minnesota
Illinois
Washington
Virginia Tech
Berkeley
UCLA
Purdue
UT-Austin
Texas A&M
Florida
Georgia Tech
NC State
$0
$2,000
$4,000
$6,000
$8,000
$10,000
$12,000
$14,000
Peer Weighted
Avg.=$7,057
Peer Weighted 75th
Percentile=$7,800


Public Peer Institutions
Out-of-State GraduateTuition and Fees
2003-2004
Michigan
Penn State
Illinois
Berkeley
UCLA
Florida
Purdue
Washington
Georgia Tech
NC State
Minnesota
UT-Austin
Texas A&M
Virginia Tech
$0
$5,000
$10,000
$15,000
$20,000
$25,000
$30,000
Peer Weighted Avg.=$17,034
Peer Weighted 75th Percentile=$18,660

Thinking about future enrollments

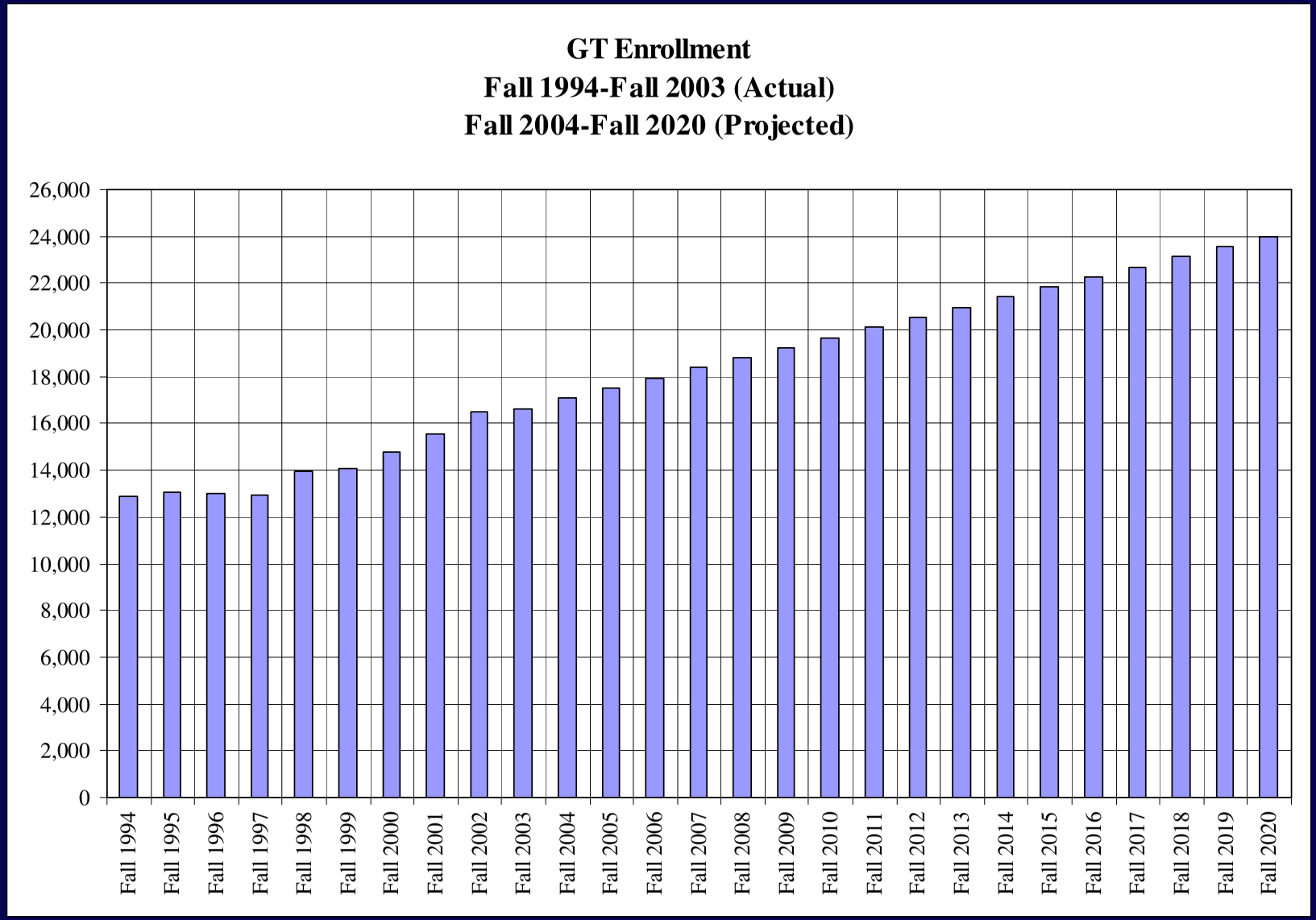


University System of Georgia
Projected enrollment

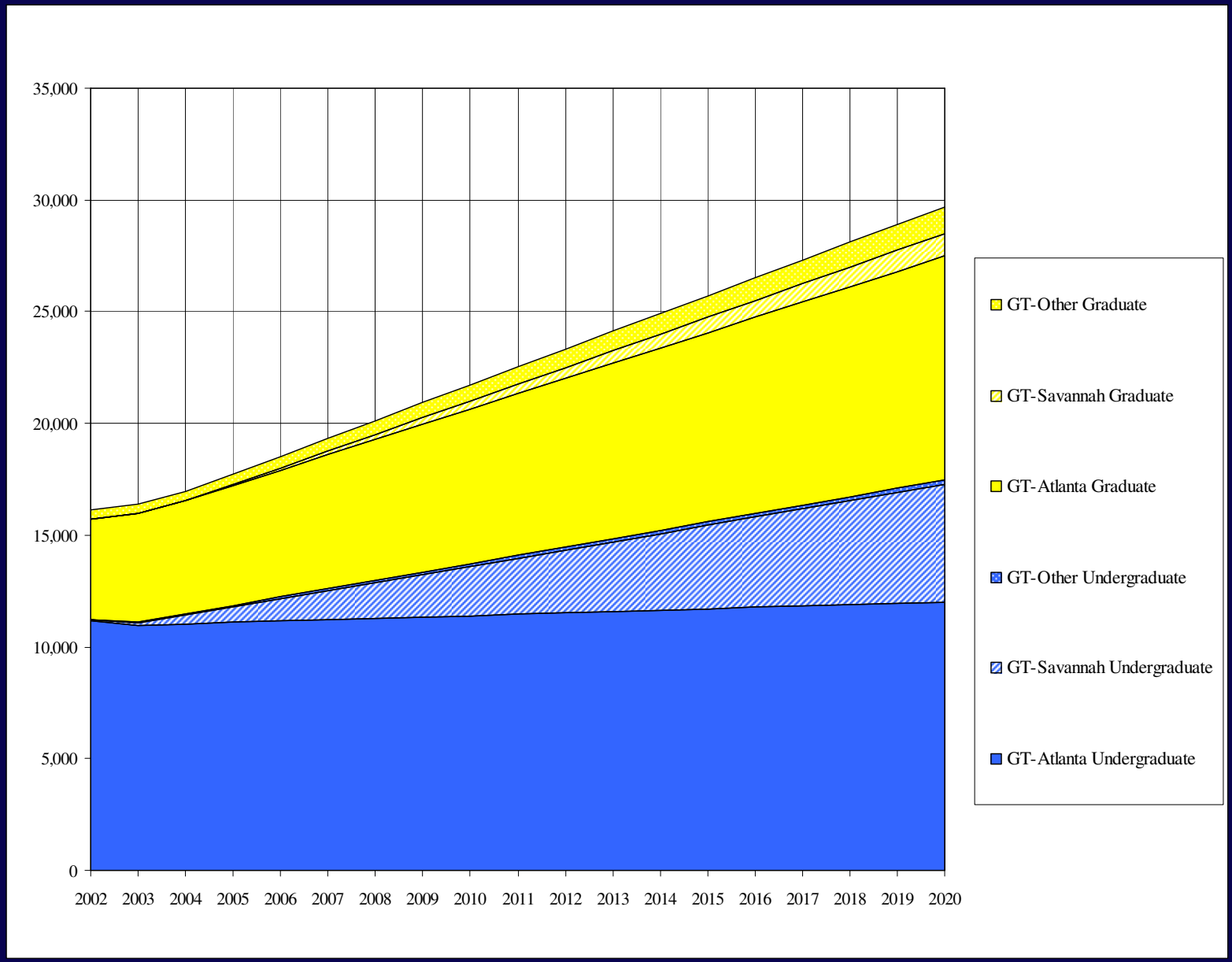


Source: System Capacity Study Presentation, November 2003

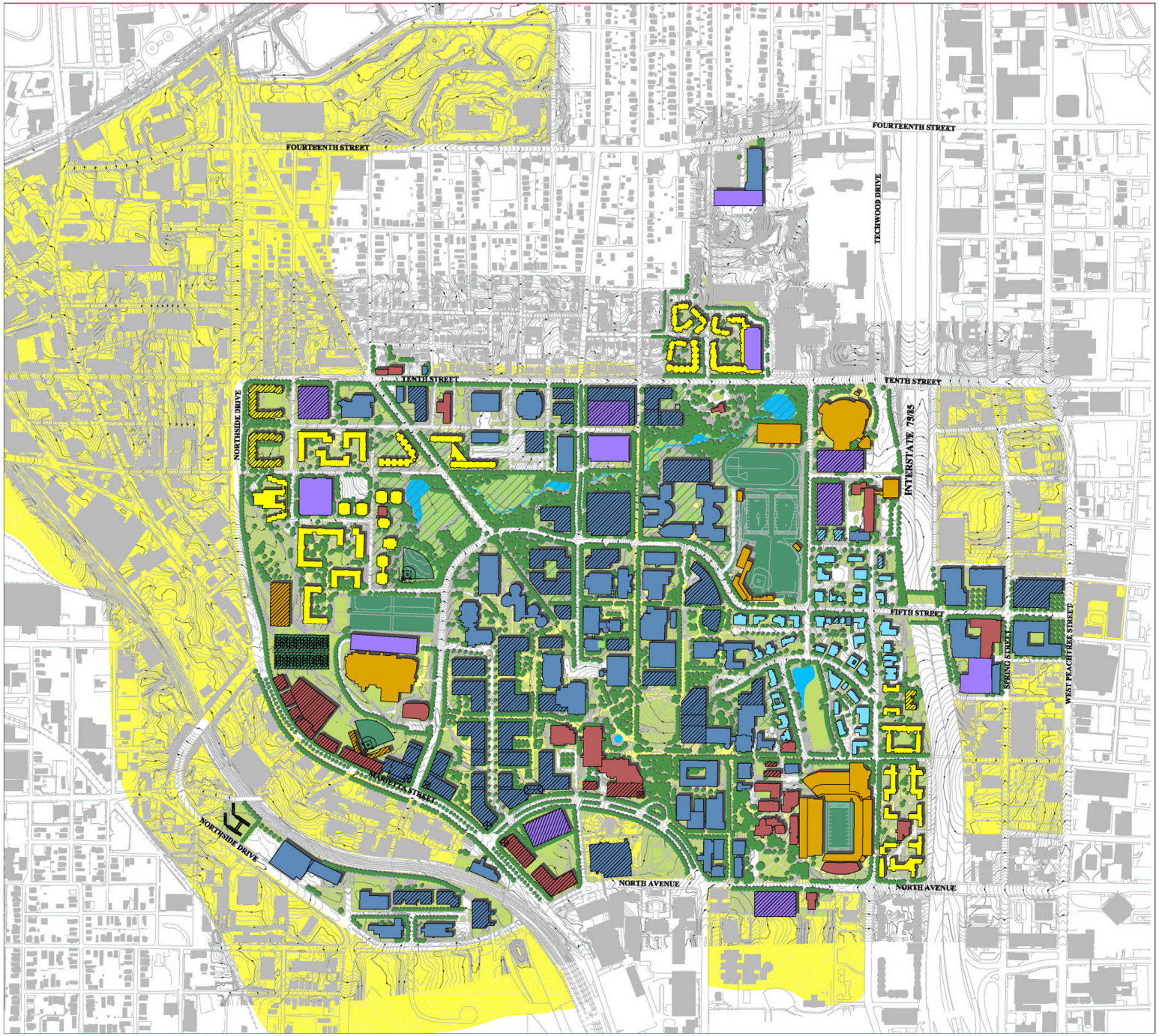
GT accounts for 6%-7% of USG enrollment



Envisioning enrollment strategies



Land acquisition



Illustrative Plan
Campus Map

Legend

- Future Building
- Green Space
- Area Preserved for Storm Water Management
- Area of Interest

Color	Use
	Instructional / Research
	Support Services
	Athletic
	Athletic Fields
	Greek / Other Organizations
	Parking Deck
	Residence Halls

The Georgia Institute of Technology

A Unit of the University System of Georgia

Atlanta, Georgia

2004 Master Plan Update

SCALE: 1"= 200'

0 100' 200'

GATV mission

To support commercialization and economic development activities at Georgia Tech

GATV governing board

- Nine-member board appointed by Georgia Tech president
- Four members from GT faculty and administration
- Five members from outside GT

Summary

Maintaining excellence in the new reality

Financial/administrative issues

- Diminishing support by State for base budget; unlikely to come back soon, if ever.
- Bureaucracy within present system.
- Lack of control over in-state tuition.
- With tuition rising, need for financial aid to help economically disadvantaged students.
- Acquiring land for long term Institute needs.
- Need to enhance endowment, particularly to drive excellence and new initiatives.
- Facilities: renovations, new buildings.

Other GT challenges

- Strengthening non-engineering programs while maintaining prominence in engineering
- Growing competition for best students
- Improving retention/graduation
- Improving diversity at all levels
- Choosing which battles to fight and which opportunities to pursue

New approaches – some examples

- Generate revenues (GATV, Exec Ed, Royalties, Ownership positions, etc.)
- Get agreement with state to delegate authority for operations, facilities.
- Agree on market value approach for tuition.
- Use 3rd party entities to acquire land.
- Work with state to create new approach to fund facilities critical to research and economic development.
- Continue to look for cost efficiencies.

Future GT opportunities

- Wave of new technologies
- Leadership position in interdisciplinary fields
- Leadership role in international platforms
- Potential for growth in biotechnology/ biomedical arena
- High performance computing and networking (ORNL, NLR)
- Leadership in diversity